Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of processing a data ~~signal,~~ signal comprising symbols each representing a plurality of data bits, the method comprising:

~~receiving a data sequence incorporating PSK symbols,~~

demodulating the data signal to determine the symbols;

~~separating the data sequence into bits of symbols,~~

mapping each of the symbols to a plurality of data bits;

assigning a confidence value to each bit in a ~~symbol,~~ symbol; and

effecting convolutional decoding of ~~the~~ a bit stream associated with the assigned confidence ~~values.~~ values, wherein the confidence values comprise constant values based on the mapping.

2. (Original) A method according to claim 1 wherein the step of assigning a confidence value comprises mapping symbols to binary bits by means of a Gray code.

3. (Previously Presented) A method according to claim 1,

further comprising incorporating data from the step of assigning in a look-up table for reference.

4. (Previously presented) A method according to claim 1 comprising re-coding hard decisions as an (I,Q) pair and taking soft decisions therefrom.

5. (Previously Presented) A method according to claim 1 comprising demodulation by decision feedback equalization with whitening matched filtering.

6. (Previously Presented) A method according to claim 1 comprising using a digital processor for equalization.

7. (Previously Presented) A method according to claim 1 using dedicated signal processing hardware for equalization.

8. (Previously presented) A method according to claim 1 comprising de-interleaving, de-puncturing and incremental redundancy steps before convolutional decoding.

9. (Currently Amended) A computer program product directly loadable into the internal memory of a digital computer, comprising software code portions for processing a data ~~signal~~ signal, the data signal comprising symbols each representing a plurality of data bits, when said product is run a computer by carrying out the steps of:

~~receiving a data sequence incorporating PSK symbols,~~

demodulating the data signal to determine the symbols;

~~separating the data sequence into bits of symbols,~~

mapping each of the symbols to a plurality of data bits;

assigning a confidence value to each bit in a ~~symbol,~~ symbol; and

effecting convolutional decoding of ~~the~~ a bit stream associated with the assigned confidence ~~values.~~ values, wherein the confidence values comprise constant values based on the mapping.

10. (Currently Amended) An apparatus for processing a data ~~signal,~~ signal comprising symbols each representing a plurality of data bits, the apparatus comprising:

means to receive ~~a data sequence incorporating PSK symbols,~~ the data signal;

means to demodulate the data signal to determine the symbols;

mapping means ~~to map the data sequence into bits of~~ for mapping each symbol to a plurality of bits ~~symbols~~ and ~~to assign~~ for assigning to each bit a confidence value; ~~value to each bit in the symbols,~~ and

means ~~to effect~~ for effecting convolutional decoding of ~~the~~ a bit stream associated with the assigned confidence ~~values.~~ values, wherein the confidence values comprise constant values based on the mapping.

11. (Currently Amended) ~~Apparatus~~ An apparatus according to claim 10 wherein the mapping means is adapted to map symbols to binary bits by a Gray code.

12. (Previously Presented) An apparatus according to claim 10, further comprising a look-up table incorporating data from the mapping means.

13. (Currently Amended) ~~Apparatus~~ An apparatus according to claim 10 comprising means to re-code hard decisions as an (I,Q) pair and means to take soft decisions therefrom.

14. (Currently Amended) ~~Apparatus~~ An apparatus according to claim 10 comprising demodulation by decision feedback equalization with whitening matched filtering.

15. (Currently Amended) ~~Apparatus~~ An apparatus according to claim 10 comprising a digital processor for equalization.

16. (Currently Amended) ~~Apparatus~~ An apparatus according to claim 10 comprising dedicated signal processing hardware for equalization.

17. (Currently Amended) ~~Apparatus~~ An apparatus according to claim 10 comprising means to de-interleave, depuncture, and effect incremental redundancy before convolutional decoding.

18. (Canceled)

19. (Canceled).

20. (Previously Presented) The method of claim 1, wherein the step of assigning a confidence value to each bit in a symbol includes assigning a confidence value based upon the position of the bit in its symbol.

21. (Previously Presented) The apparatus of claim 10, wherein the mapping means assigns a confidence value to each bit in the symbols by assigning a confidence value based upon the position of the bit in its symbol.

22. (New) The computer program product of claim 9 wherein assigning confidence values to bits comprises retrieving confidence values from a look-up table.

23. (New) The computer program product of claim 22 wherein the confidence values further comprise confidence values based on interpolation between values in the look-up table.

24. (New) The method of claim 1 wherein the confidence values further comprise confidence values based on interpolation between values stored in a look-up table.

25. (New) The apparatus of claim 10 wherein the confidence values further comprise confidence values based on interpolation between values stored in a look-up table.

26. (New) An apparatus for processing a data signal comprising symbols representing data bits, the apparatus comprising:

a demodulator configured to extract the symbols from the signal;

a symbol mapper configured to map each symbol to a respective plurality of bits and to assign a confidence value to each bit, the confidence values comprising constant values based on the mapping; and

a convolutional decoder configured to decode a bit stream associated with the assigned confidence values.

27. (New) The apparatus of claim 26 wherein the symbol mapper is configured to map symbols using a Gray code.